

DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES

STAFF REPORT

- ☒ PROPOSED COUNTY CODE AMENDMENT
- ☒ PROPOSED PFM AMENDMENT
- ☐ APPEAL OF DECISION
- ☐ WAIVER REQUEST

Proposed Amendments to the Public Facilities Manual and Chapters 101 (Subdivision Ordinance) and 112 (Zoning Ordinance) of the *Code of the County of Fairfax, Virginia* Re: Editorial Changes to the Fire Regulations, Manhole Plate References and Vertical Datum Requirements.

Authorization to Advertise	<u>February 26, 2013</u>
Planning Commission Hearing	<u>April 4, 2013</u>
Board of Supervisors Hearing	<u>April 30, 2013</u>
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	February 26, 2013

STAFF REPORT

A. Issue:

Proposed amendments to the Public Facilities Manual (PFM) and Chapters 101 (Subdivision Ordinance) and 112 (Zoning Ordinance) of the *Code of the County of Fairfax, Virginia* (County Code). The amendments include editorial changes to the fire regulations, manhole plate references and vertical datum requirements.

B. Recommended Action:

Staff recommends that the Board of Supervisors adopt the proposed amendments and that the amendments become effective the day following adoption.

C. Timing:

Board of Supervisors' Authorization to Advertise – February 26, 2013
Planning Commission Public Hearing – April 4, 2013
Board of Supervisors Public Hearing – April 30, 2013

D. Source:

Department of Public Works and Environmental Services (DPWES)

E. Coordination:

The proposed amendments have been prepared by the Department of Public Works and Environmental Services (DPWES) and coordinated with the Office of the County Attorney. The PFM amendment related to the fire regulations has also been reviewed by the Fairfax County Fire & Rescue Department, Fire Prevention Division. The vertical datum amendment has been coordinated with the County Surveyor. All of the PFM amendments have also been recommended for approval by the Engineering Standards Review Committee.

F. Background:

The proposed editorial amendments are related to the fire regulations, manhole plate references, and the vertical datum requirements of the Site Plan and Subdivision Ordinances, and the PFM. Background information on each amendment is provided below.

Fire Regulations

On January 10, 2012, the Board adopted amendments to the County's Fire Protection Code, Chapter 62 of the County Code, related to Fire Department

access and fire protection. The adopted County Code amendments were necessitated by amendments to the 2009 Statewide Fire Prevention Code (SFPC) adopted during the 2011 Virginia General Assembly. The proposed PFM amendment updates the PFM to align with the adopted changes to the Statewide and County Fire Prevention Codes.

Manhole Plate References

The details (Plates) in the PFM specify material and construction specifications from ASTM, AASHTO, and other recognized organizations. From time to time, the referenced specifications become outdated or obsolete. The proposed amendment updates the concrete pipe and manhole joint specification numbers in Plates #3-10, #4-10 and #5-10 of the PFM.

Vertical Datum Requirements

A vertical datum is a reference point against which measurements are made. In engineering and survey applications, a vertical datum is used to measure elevations, which are heights above and depths below a reference point. Assurance that elevations are accurate is based on, among other things, whether the surveyor's reference to the fixed datum is accurate and complies with the County's vertical datum requirement. The vertical datum requirement was first established on December 11, 1963, upon the Board of Supervisors' adoption of the booklet entitled "Policies and Guidelines for the Preparation of Subdivision Plans and Site Development Plans" - the precursor to the PFM. The requirement has not changed over time. It has been replicated in the PFM and Site Plan and Subdivision Ordinances and states that "all elevations shall be correlated to the U.S. Geological Survey" (USGS). Although unspecified in the regulations, it is intended that all elevations be referenced to the National Geodetic Vertical Datum of 1929 (NGVD 29); the U.S. Geological survey's vertical datum at the time.

NGVD 1929 was superseded by the creation of the North American Vertical Datum of 1988 (NAVD 88). The difference between the two datums varies from location to location. In Fairfax County, the average offset (the difference between NAVD 88 and NGVD 29) is about eight inches. The proposed amendment addresses the County's concern that developers, and their engineers and surveyors, are unable to distinguish the small offset and thus, recognize that the wrong datum is being used. The proposed amendment revises the PFM to clarify that all plans submitted to Fairfax County must use the NGVD 1929 datum.

G. Proposed Amendments:

Fire Regulations

The proposed amendment updates § 9-0202 (Fire Marshal Requirements) of the PFM to align with the County and Statewide Fire Protection Codes. Specifically, the PFM is being revised to:

- 1) Clarify the process for modifying the fire protection provisions set forth in § 9-0202.2I of the PFM; and
- 2) Update the fire department access provisions set forth in § 9-0202.2J and related note in Tables 7.6 and 7.7 (Parking Geometrics).
- 3) Amend Plate # 6-9 (Fire Lanes) to incorporate the parking and curb designation requirements for fire lanes.

A copy of the proposed amendments is included as Attachment A.

Manhole Plate References

The proposed amendment updates PFM Plates #3-10, #4-10, and #5-10 to reflect the correct ASTM specification number for joints for concrete pipe and manholes, using rubber gaskets. The revised Plates are included as Attachment B.

Vertical Datum Requirements

To combine or compare elevations from different sources, the elevations must be referenced to the same vertical datum. Using inconsistent datums in the County is problematic. Although it does not change the elevation of a fixed point related to another nearby point, it does create gaps and inconsistencies in computed elevations which can impact site flow, particularly on flat areas of a site. In addition, the use of inconsistent datums can cause inaccuracies and uncertainties with the transfer of data between developers and among engineering and surveying firms. It is useful at this time to revise the regulations to eliminate the confusion and inaccuracies caused by the creation of the newer datum.

Specifically, the proposed amendment revises PFM § 2-0107 (Topography), § 17-106 (Required Information on Plans) of the Zoning Ordinance, and § 101-2-5 (Final Subdivision Plat Preparation) of the Subdivision Ordinance to strike out the reference to USGS, and replace it with NGVD 1929, the intended datum. This would be consistent with the FEMA published Base Flood Elevations (BFE), shown on the Fairfax County DFIRM maps and flood profiles in the flood insurance studies, which are referenced to NGVD 1929. In addition, to address a valid concern from industry surveyors, the proposed amendment strikes incorrect text related to GIS survey monuments and adds text allowing the use of GPS static data. A copy of the proposed amendment is included as Attachment C.

H. Regulatory Impact:

The proposed amendments are miscellaneous, editorial amendments related to the fire regulations, the references made in some PFM plates, and the vertical datum requirement for all plan submissions to Fairfax County.

The proposed Fire Marshal amendment updates § 9-0202, Tables 7.6 and 7.7 and Plate #6-9 of the PFM to align the Countywide and Statewide Fire Protection Codes. The PFM Plates #3-10, #4-10, and #5-10 are being revised to update the ASTM specification related to joints for concrete pipes, and manholes, using rubber gaskets. Lastly, the vertical datum provision in the PFM, and replicated in the Zoning and Subdivision Ordinances, are being revised to clarify that all elevations shall be based on NGVD 1929.

I. Attachments:

Attachment A:	Proposed Amendment related to Fire Regulations
Attachment B:	Proposed Amendment related to Manhole Plate References
Attachment C:	Proposed Amendment related to Vertical Datums